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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,580	02/09/2004	Bruce S. Jones	NUKZ 2 00339	3207
27885	7590	10/10/2006	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			MARTIN, LAURA E	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/774,580	<b>Applicant(s)</b> JONES, BRUCE S.	
	<b>Examiner</b> Laura E. Martin	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 26-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7-14, 16-18, 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz et al. (US 2004/0021751) in view of Jones et al. (US 20020191059).

#### **Steinmetz et al. discloses the following claim limitations:**

As per claim 1: a housing having a chamber (figure 16, element 206) formed therein for receiving ink and a surface including an outlet passage (figure 21, element 158) communicating with the chamber through which the ink is dispensed; and a seal member (figure 17, element 260), said seal member comprising raised portions (figure 17) on a first surface and a second surface, wherein said surfaces are on opposite sides of said member, and said surfaces are adapted to be compressed when said seal member is installed in said outlet passage (figures 17 and 18, when the ball is placed in the seal, the seal must be compressed to prevent leakage, [0068]).

As per claim 2: the raised portions are substantially v-shaped (figure 17).

As per claim 11: the seal member engages an inner wall of said outlet passage (figure 17).

As per claim 16: inserting a generally annular-shaped seal member into a counter bore into a counterbore of said outlet port formed at an outer terminal end portion of the outlet port (figure 17, element 260 surrounds opening element 202); placing a cap member (figure 18, element 268) over said outer portion of said outlet port; linearly compressing said seal member between said cap and outlet port (figure 18)

As per claim 17: the seal member comprises ridges (figure 17) formed on a first and second surface of the seal member, wherein the ridges are contracted by the cap (figure 17, element 268) and said outer terminal end portion of the outlet port during compression [0068] (the seal must be compressed when ball (cap member) is pressed against it to form a seal).

As per claim 18: the seal member raised portions comprised substantially v-shaped ridges (figure 17).

As per claim 20: the seal member engages an inner wall of said outlet passage (figure 17).

As per claim 23: a lower surface (figure 17, right side of element 260), an upper surface located on an opposite side of said seal member from said lower surface (figure 17, left side of element 260); a wall extending between said lower and upper surfaces, said wall having a tapered surface extending between said lower surface and said upper surface (figure 17, element 260, the wall tapers at different locations), wherein said upper surface has a larger diameter than said lower surface (figure 18); wherein

the lower and upper surfaces each comprised a raised portion extending across said surfaces (figures 17 and 18).

As per claim 24: the raised portions are substantially v-shaped (figure 17).

As per claim 29: the upper and lower surfaces of the seal member together form a general toroidal-shaped portion (figures 17-20).

**Steinmetz et al. does not disclose the following claim limitations:**

As per claim 1: an air impermeable, non-porous seal member.

As per claims 7 and 25: the seal member is formed of a rubber.

As per claims 8 and 26: the seal member is formed of a polyvinyl chloride (PVC).

As per claims 9 and 27: the seal member is formed of a thermoplastic rubber.

As per claim 10: the seal member is formed of a silicone rubber.

As per claim 12: the seal member includes a thin membrane extending across the first surface of the seal member, said thin membrane adapted to be selectively pierced by a needle of an associated printer.

As per claims 13, 22, and 23: the seal member has a substantially disk shape.

As per claim 14: the outlet passage includes a counterbore at an outer terminal end that receives the disk-shaped seal member therein.

As per claim 16: welding a cap member.

As per claims 21 and 28: the seal member includes a thin membrane extending across an inner periphery, lower surface, of said seal member adjacent to a first surface of a seal member.

**Jones et al. discloses the following claim limitations:**

As per claim 1: an air impermeable, non-porous seal member [0007].

As per claims 7 and 25: the seal member is formed of a rubber [0008].

As per claims 8 and 26: the seal member is formed of a polyvinyl chloride (PVC) [0008].

As per claims 9 and 27: the seal member is formed of a thermoplastic rubber [0008].

As per claim 10: the seal member is formed of a silicone rubber [0008].

As per claim 12: the seal member includes a thin membrane extending across the first surface of the seal member [0019], said thin membrane adapted to be selectively pierced by a needle of an associated printer [0003].

As per claims 13, 22, and 23: the seal member has a substantially disk shape [0019].

As per claim 14: the outlet passage includes a counterbore at an outer terminal end that receives the disk-shaped seal member therein (claim 9).

As per claim 16: welding a cap member [0018].

As per claims 21 and 28: the seal member includes a thin membrane extending across an inner periphery, lower surface, of said seal member adjacent to a first surface of a seal member [0003] and [0019]; figure 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container and method taught by Steinmetz et al. with the

disclosure of Jones et al. in order to create a higher quality printing apparatus with better sealing properties.

Claims 3-6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz et al. (US 2004/0021751) and Jones et al. (US 20020191059), and further in view of Putman et al. (US 20030081085).

**Steinmetz et al. as modified discloses the following claim limitations:**

The ink container of claim 1 and the method of claim 18.

As per claims 4 and 19: Steinmetz et al. discloses a rib extending at least partially long a circumference of an outlet passage (figure 17, elements 156 and 262).

As per claim 5: Steinmetz et al. discloses the seal adapted to be linerally compressed between said cap (figure 1, element 268) and said outlet passage (figure 17 and [0068]).

**Steinmetz et al. as modified does not disclose the following claim limitations:**

As per claim 3: a cap member having a recess for receiving said outlet passage.

As per claim 4: an outer terminal end of said outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet passage.

As per claim 6: the cap is formed of plastic.

**Putman et al. discloses the following claim limitations:**

As per claim 3: a cap member having a recess for receiving said outlet passage (figure 1, element 80).

As per claims 4 and 19: an outer terminal end of said outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet passage [0021] and [0025] (the energy from ultrasonic welding produces heat).

As per claim 6: the cap is formed of plastic [0025].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container and method taught by Steinmetz et al. as modified with the disclosure of Putman et al. in order to provide for a higher quality ink container with less leaking.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2853

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 9/29/06  
**MANISH S. SHAH**  
**PRIMARY EXAMINER**